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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/824,645

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Jinlian Hu

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EXAMINER

BROOKS, KRISTIE LATRICE

ART UNIT

PAPER NUMBER

1616

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/824,645	Applicant(s) HU ET AL.	
	Examiner KRISTIE L. BROOKS	Art Unit 1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 March 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,8-11 and 13-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,8-11 and 13-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of Application

1. Claims 1,2,4,8-11, and 13-19 are pending.
2. Receipt and consideration of Applicant's remarks/arguments file on March 2, 2009 is acknowledged.
3. Upon further consideration by the Examiner, the Final rejection mailed December 2, 2008 is vacated and a non-final rejection is presented below.

New Grounds of Rejection

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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5. Claims 1,2,4, 8-11,13-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ness et al.(US 6,194,375) in view of Sumiya et al. (US 6,303,711) and Inaoka et al (US 5,556,835).

Applicant claims a method of manufacturing a deodorant including the steps of forming polymer particles by reacting a main monomer of (N-substituted alkyl)acrylamide, a functional monomer for bonding the polymer particles to a fibrous substrate, a cross-linking agent, and an initiator; and loading a deodorant agent to the polymer particles, wherein the deodorant is selected from the group consisting of C18:1 dioic acid, C18:2 dioic acid, and phenyl compounds.

Determination of the scope and content of the prior art

(MPEP 2141.01)

Ness et al. teach a perfume composition wherein the perfume is absorbed within the organic polymer particles which further incorporate a polymer with free hydroxyl groups that remain at the exterior of the particles (see the abstract). The hydroxyl functional polymer help enhance deposition on the surface of skin, hair and hard surfaces and participate in hydrogen bonding (see column 3 lines 5-9). Examples of the organic polymers include isobutylmethacrylate, hydroxypropyl methacrylate, hydroxyethylacrylate, etc. (see column 4 lines 29-33 and column 5 lines 1-3). Examples of the functional polymer include hydroxypropylethylcellulose or polyvinyl alcohol (see column 3 lines 5-55). The functional polymer is present in an amount of up to 25% by weight (see claim 1).

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Cross-linking agents such as divinyl benzene, diesters, can be included in an amount up to 10% by weight (see column 4 lines 38-50).

The organic polymer particles are reacted together with the hydroxyl functional polymer, cross-linking agent and a polymerization initiator (i.e. 2,2'-azo(bis)isobutylnitrile (see column 5 lines 16-26, column 7 lines 12-64 and Example 1). Examples of the perfumes that may be used include benzyl alcohol, salicylate, monoterpenes, such as limonene, etc. (see column 8 lines 8-67 and column 9 lines 1-22). The formulation may further contain additional ingredients such as aliphatic alcohols, polyols, etc. (see column 11 lines 10-39).

Ascertainment of the difference between the prior art and the claims

(MPEP 2141.02)

Ness et al. do not teach the instantly claimed main monomers in the instant claim 2. Further, Ness et al. do not teach the instantly claimed cross-linking agents. These deficiencies are cured by the teachings of Sumiya et al. and Inaoka et al.

Sumiya et al. teach a water absorbent and retention composition comprising a polymer particle material derived from the monomer units components comprising meth(acrylamide) and acrylic acid (see column 3 lines 43-61 and column 7 lines 60-67). The composition may further incorporate perfumes, deodorants, etc., into the material (see column 13 lines 62-67).

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Inaoka et al. teach a fragrance composition comprising an oil-absorbable resin comprising cross-linkable monomer particles and a cross-linking agent (see the abstract, column 2 lines 36-48, and claim 7). Examples of cross-linking agents include N,N'-methylenebisacryamide, divinylbenzene (see column 3 lines 48-63).

Finding of prima facie obviousness

Rational and Motivation (MPEP 2142-2143)

One of ordinary skill in the art would have been motivated to use the instantly claimed main monomers because meth(acrylamide) is a known main monomer for use in the manufacturing of deodorant products, as suggested by Sumiya et al.

Thus, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to manufacture said deodorant using the instantly claimed main monomers because the instantly claimed main monomers are obvious variations of monomers that are capable of use in the manufacture of fragrance/deodorant products.

Although Ness et al. do not teach the instantly claimed cross-linking agents, one of ordinary skill in the art would have been motivated to use the instantly claimed cross-linking agents because N,N'-methylenebisacryamide and divinylbenzene are known cross-linking agents for use in fragrance compositions, as suggested by Inaoka et al.

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Thus, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to manufacture said deodorant using the instantly claimed cross-linking agents because the instantly claimed cross-linking agents are obvious variations of cross-linking agents that are capable of cross-linking the main monomer and functional monomer during the polymerization process of the deodorant products.

Therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

Response to Arguments

Applicant's arguments with respect to claims 1,2,4,8-11, and 13-19 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KRISTIE L. BROOKS whose telephone number is (571)272-9072. The examiner can normally be reached on M-F 8:30am-6:00pm Est..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann R. Richter can be reached on (571) 272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KB

/Johann R. Richter/

Supervisory Patent Examiner, Art Unit 1616